

CLAIMS

1. A cafeteria tray accumulator system comprising:

a drive track disposed in a looped path; the looped path having a pair of transverse legs offset in a vertical direction;

5 a plurality of tray-holding cages connected to the drive track;

each of the tray-holding cages adapted to hold a plurality of cafeteria trays; and

a drive unit adapted to move the plurality of cages around the looped path of the drive track.

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2. The system of claim 1, wherein the drive track is a monorail.

3. The system of claim 2, further comprising a counterbalance rail.

15 4. The system of claim 3, further comprising a support bar attached to the drive track for each tray-holding cage; the support engaging the counterbalance rail.

5. The system of claim 4, wherein each tray-holding cage is suspended from the support bar.

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6. The system of claim 5, wherein each tray-holding cage is adapted to hold at least three trays.

7. The system of claim 1, wherein the transverse legs of the looped path are offset in a horizontal direction.

8. The system of claim 1, wherein the looped path turns around at least one right angle.

9. The system of claim 8, wherein the right angle is horizontal.

10. The system of claim 8, wherein the right angle is vertical.

11. The system of claim 1, wherein the drive track is disposed in a vertical plane.

12. A section of drive and counterbalance track used to create a conveyor rail for a cafeteria tray accumulator; the section comprising:

a section of monorail having a first length;

a section of counterbalance rail having a second length;

the section of monorail being substantially parallel to the section of counterbalance rail;

the section of counterbalance rail being spaced apart from the section of monorail; and

the first length being substantially equal to the second length.

13. The section of claim 12, wherein the section of monorail is connected to the section of counterbalance rail.

14. The section of claim 13, wherein each section has end flanges adapted to allow additional sections to be connected end-to-end.

15. The section of claim 12, wherein the sections are connected with at least two spaced supports.

16. A cafeteria tray accumulator system comprising:

a monorail drive track disposed in a looped path; the looped path hauling first and second transverse legs offset in a vertical direction;

a plurality of tray-holding cages connected to the monorail;

a counterbalance rail;

each cage disposed intermediate the drive track and the counterbalance rail;

each of the tray-holding cages engaging the counterbalance rail;

each of the tray-holding cages adapted to hold a plurality of trays;

a drive unit adapted to move the plurality of cages around the looped path of the drive.

17. The system of claim 16, wherein the looped path is disposed in a vertical plane.

18. The system of claim 16, wherein the counterbalance rail is a monorail.

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19. The system of claim 18, wherein each of the monorails has a hollow tube section with rollers disposed inside the tube section.

20. The system of claim 16, further comprising a self-supporting frame that carries the drive track and the counterbalance rail.

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